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September
Precipitation Over
the Great Lakes

As a percentage of
the long-term
September average:

Great Lakes 91%
Basin

Lake Erie 57%
(including
Lake St. Clair)

Lake Superior 99%

Lakes 99%
Michigan-
Huron

Lake Ontario 75%

LEVEL news

Great Lakes St. Lawrence River Water Levels



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Dry Weather Over Great Lakes Basin

Rapid Decrease in Lake Levels During September

Dry, warm weather over most of the Great Lakes basin during September contributed to an above average decline in lake levels during the month. This decline brought levels of all of the Great Lakes to within 30 centimetres of their average levels for the first time since June 1996.

For the third consecutive month, rainfall was below average over the drainage basins of Lakes Superior, Michigan and Huron. Over these three months, Lake Superior's level has declined by 15 cm and Lake Huron's level has decreased by 30 cm. By comparison, during the same three-month period in 1996, which was a period of nearly average rainfall, Lake Superior's level went up about 10 cm and Lake Huron's level did not change.

As a result of the unusual decline in Lake Superior's level, it was at its lowest September level since 1926. At the beginning of October, Lake Superior was 26 cm below average, while Lake Huron was 10 cm above average.

The dry conditions spread into the basins of the lower Great Lakes as well during September. During the previous two months this area had received a slightly above average amount of precipitation. With the drier and warm conditions in September, Lakes St. Clair, Erie and Ontario all declined by more than their average amounts. At the beginning of October, Lake St. Clair was 23 cm above average, Lake Erie was also 23 cm above average, and Lake Ontario was six cm below average. This marks the first time that Lake Ontario's level has been below average since April 1996.

Lake St. Lawrence Water Levels Improved in September

Water levels on Lake St. Lawrence rose slightly in September, much to the relief of some recreational boaters in that part of the St. Lawrence River immediately upstream of Cornwall, Ontario. In our previous issue, we reported on the low water level problems faced by boaters due to declining Lake Ontario water levels and high flows at Cornwall's hydropower dam.

Several factors acted in the boaters favour. First, there was a slight

Note: These figures are preliminary.

September Outflows From the Great Lakes

As a percentage of
the long-term
September average:

Lake Superior	66%
Lake Erie	110%
Lake Huron	100%
Lake Ontario	114%

Note: These figures are preliminary.

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Summary information for
"LEVELnews"

reduction in the Lake Ontario outflow, during the period August 20 - September 9, that was directed by the International St. Lawrence River Board of Control. Secondly, the Lake St. Lawrence area got a considerable amount of rain, which increased the flows of the local tributaries. Lastly, easterly winds, which can aggravate the low water level conditions on Lake St. Lawrence, were noticeably absent.

During the three week period when the Lake Ontario outflow was reduced, the levels on Lake St. Lawrence averaged at elevation 72.88 m. While this was still 40 cm below average, it was much better than earlier in the summer when levels were as much as 70 cm below average.

The water level of Lake St. Lawrence is expected to continue to decline the rest of this year. During Thanksgiving weekend (October 10-12), the Lake Ontario outflow will again be reduced by a small amount (about 2 1/2%) in order to temporarily raise the water level on Lake St. Lawrence, for the purpose of helping marinas to take their boats out of the water. The flow reduction should bring a very slight improvement in the water levels at that time. But boaters are advised that weather conditions, in terms of winds or rain, may not be as favourable this time around.

Open House Scheduled

The International Niagara Board of Control is holding an open house on October 20 at 7:30 p.m. at the Hyatt Regency Buffalo, Two Fountain Plaza, Buffalo, New York (Tel. 716-856-1234).

The purpose of this open house is to inform the public of the Board's current activities and to hear public comments and suggestions regarding the Board's work. In addition, information will be presented on Great Lakes' water levels, Ontario Hydro's proposed new diversion tunnel and the twinning of the Peace Bridge.

Why Have Lake Levels Gone Down so Much?

As the decline in lake levels has picked up speed over the past few months, this is a question we have been hearing more and more. Regardless of whether people view this decline as positive or negative (and we hear both viewpoints), the magnitude of the decline over the summer has surprised many.

Surprisingly, precipitation over the whole Great Lakes basin from January to August this year was only 1% below normal. However, the rainfall has not been uniformly distributed over the basin -- Lake Superior's basin have been much drier than average, while Lake Ontario's basin has been wetter than average. Furthermore, much of this year's precipitation occurred during the winter months, with progressively drier conditions during the spring and summer. So below average rainfall has been one factor, particularly for Lake Superior and to a lesser extent on the other lakes over the past six months.

A second factor that has probably had an equal or greater impact has been the above average temperatures over the past several months. Warm temperatures increase the amount of water used by vegetation and transpired to the air. Evaporation from the land and the lakes' surfaces is also higher

during warm periods. As a result, runoff from rivers to the lakes has been very low since spring.

Lake Ontario's level has also been influenced by the regulation of its outflow. During most of the spring and summer the lake's outflow has been much above average (and also above what it would have been if regulation had not been implemented) which has contributed to its rapid decline.

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